



Contents lists available at ScienceDirect

# Journal of Forensic and Legal Medicine

journal homepage: [www.elsevier.com/jflm](http://www.elsevier.com/jflm)



## Original Communication

### Characteristics of sexual assaults in which adult victims report penetration by a foreign object

Elizabeth Ann Sturgiss BMed MPH (Forensic Medical Officer<sup>1</sup>, Sexual Health Registrar<sup>2</sup>)\*, Alexandra Tyson MB BS MFM (Forensic Medical Officer<sup>1</sup>, Staff Specialist<sup>2</sup>), Vanita Parekh MBChB MFM (Director<sup>1</sup>, Senior Staff Specialist<sup>2</sup>)

Forensic and Medical Sexual Assault Care ACT, PO Box 11, Woden 2606, Australia  
Canberra Sexual Health Centre, The Canberra Hospital, PO Box 11, Woden 2606, Australia

#### ARTICLE INFO

##### Article history:

Received 18 February 2009  
Received in revised form 12 August 2009  
Accepted 1 November 2009  
Available online 2 December 2009

##### Keywords:

Sex offenses  
Object  
Adult

#### ABSTRACT

This retrospective clinical audit reviews cases of adult sexual assault where the victim alleges that they were penetrated with a foreign object. These assaults were more likely to have positive genital and non-genital findings recorded by the clinician compared to assaults where no object was used. There is a suggestion that these assaults may be more violent with multiple assailants more common and an association with more use of threats and weapons. It is important to ask about the penetrative use of foreign objects in a sexual assault history and for clinicians to be aware of the greater possibility of injury in these cases.

Crown Copyright © 2009 Published by Elsevier Ltd. and Faculty of Forensic and Legal Medicine. All rights reserved.

## 1. Introduction

In the Australian Capital Territory (ACT) the Crimes Act 1900 deals with the issue of non-consensual sexual intercourse and sexual violence. Section 50 deals with the definition of “sexual intercourse” and explicitly includes penetration by an object:

*“the penetration, to any extent, of the vagina or anus of a person by an object, being penetration carried out by another person, except if that penetration is carried out for a proper medical purpose or is otherwise authorised by law”.*

In a legal sense penetration of the vagina includes any penetration beyond the labia majora, although this is not expressed specifically in the ACT legislation.

Although it is recognised that foreign objects may be used to penetrate a victim during a sexual assault there is a paucity of published data regarding this aspect of sexual assault in adults. Some studies of genital injuries and mechanisms of injury<sup>1–4</sup> report the use of foreign objects, but we are unable to find any case series in the published literature. A scrutiny of a series of cases can provide clinically useful information and here we present a series of

cases where adults presenting to a specialised sexual assault service reported being penetrated by a foreign object during a sexual assault.

## 2. Methods

Forensic and Medical Sexual Assault Care (FAMSAC) provides medical and forensic care for people 15 years of age and over in the Australian Capital Territory (ACT) and surrounding region. FAMSAC is staffed by doctors with training in forensic medical care and a registered nurse with specific forensic training. Data concerning all aspects of the reported sexual assaults has been collected since the inception of the service in July 2001.

We conducted a retrospective audit of all cases listed in the database between 1 July 2001 and 30 June 2008 including those clients who made a formal police report, as well as those that only sought medical care after a sexual assault. All case data were de-identified and it was approved on 8th September 2008 by the ACT Health Human research Ethics committee.

Cases in which the victim reported penetration by a foreign object were identified from the general database and their clinical files were reviewed. Data collected included the type of object used, genital and other injuries and characteristics of the alleged assailant.

Cases involving penetration by an object were compared to a subset of sexual assault cases without penetration by an object. This subset included all cases that had a complete record of a com-

\* Corresponding author. Tel.: +61 2 6244 2184; fax: +61 2 6285 3395.

E-mail address: [elizabeth.sturgiss@act.gov.au](mailto:elizabeth.sturgiss@act.gov.au) (E.A. Sturgiss).

<sup>1</sup> Forensic and Medical Sexual Assault Care ACT, PO Box 11, Woden 2606, Australia.

<sup>2</sup> Canberra Sexual Health Centre, The Canberra Hospital, PO Box 11, Woden 2606, Australia.

prehensive forensic medical history and examination (Medical Examination Record) within 7 days of the alleged assault. Those cases presenting for medical care only (i.e. no forensic examination) were excluded from this study. For analysis of genital and non-genital injuries, only those cases involving penetration by an object that were seen within 7 days of the alleged assault and underwent an examination were included in the comparison.

All results are reported as simple proportions with 95% confidence intervals where appropriate.

### 3. Results

Of the 826 cases of sexual assault seen by FAMSAC clinicians during the audit period, 20 attendees (19 females and 1 male) reported the penetrative use of a foreign object (2.4%, 95% CI: 1.5–3.7%). All of the 20 cases allegedly involved a male assailant.

The type of object described by the FAMSAC attendees included:

- Alcohol or other drink bottle (six).
- Lubricant bottle (two).
- Pasta sauce jar (one).
- Dildo (penis shaped object) (one).
- Pencil (one).
- Hair brush handle (one).
- Screw driver handle (one).
- Chopstick (one).
- Bottom stem of plastic glass (one).

Three victims reported the use of more than one type of object. In seven of the 20 cases the victim was unsure what type of object was used, but for three of these cases they were able describe the object such as hard, cold, sharp, not thick. In one case pieces of glass and dirt were found in and around the vagina at forensic examination. In no other case was the object, or any part of it, found in an orifice during examination.

Table 1 outlines the reported use of other body parts for penetration with four reporting the use of the object alone, eight reporting penile and object penetration, three reporting object and digital penetration and five reporting penetration by all three.

The majority of women reporting penetration with an object reported vaginal penetration and more than a third reported anal penetration (Table 2). In each instance the penetration may have been with the object involved or a body part, however at least one orifice was penetrated with the object. One female victim said the object had penetrated her urethra.

**Table 1**

Reported object and/or body part used for penetration in adult sexual assaults involving a foreign object.

Reported penetration with	Number (total 20)
Object only	4 (20%)
Object and penis	8 (40%)
Object and digit	3 (15%)
Object, penis and digit	5 (25%)

**Table 2**

Body orifice penetrated by type of adult sexual assault.

Orifice penetrated	Type of sexual assault					
	With penetrative object			Without penetrative object		
	No.	%	95% CI	No.	%	95% CI
Vagina	16/19	84.2	60.4–96.6	349/496	70.4	66.1–74.4
Anus – actual	7/20 <sup>a</sup>	35.0	15.4–59.2	86/520 <sup>a</sup>	16.5	13.5–20.0
Anus – attempted	2/20 <sup>a</sup>	10.0	1.2–31.7	31/520 <sup>a</sup>	6.0	4.1–8.4

<sup>a</sup> Includes the male attendees.

**Table 3**

Positive examination findings by type of sexual assault in attendees examined within 7 days.

Body site	With penetrative object			Without penetrative object		
	No.	%	95% CI	No.	%	95% CI
Genital	9/12	75.0	42.8–94.5	199/520	38.3	34.1–42.6
Non-genital	11/12	91.7	61.5–99.8	276/520	53.1	48.7–57.4

Attendees describing sexual assaults where a penetrative object was used were more likely than attendees describing sexual assault without a penetrative object to report that the assailant used verbal threats, weapons or restraints during the alleged assault (9/20, 45.0% (95% CI: 23.1–68.5) compared to 109/520, 21.0% (95% CI: 17.5–24.7).

Positive genital findings were more likely to be recorded by the clinician when an object was involved (Table 3). The genital findings recorded included abrasions and lacerations as well as redness and tenderness (Table 4). The majority of examinations were performed within 24 h of the alleged assault and all genital abrasions and lacerations were identified within this time frame.

A positive non-genital finding occurred in 91.7% (95% CI: 61.5–99.8%) of alleged sexual assaults involving a penetrative object compared to 53.1% (95% CI: 48.7–57.4%) among those reporting sexual assault without a penetrative object. Observed non-genital findings included redness, bruises, abrasions, bites and lacerations. None of the genital or non-genital injuries required surgical intervention.

Penetration by an object was more common when two or more assailants were involved. Similar percentages of attendees had sought treatment before having forensic evidence collected (Table 5). Although the results suggest that the victim was more likely to have “just met” the assailant when a penetrative object was used, the relationship recorded between the assailant and victim requires further clarification (see Section 4).

### 4. Discussion

This small series of cases provides useful information about the use of foreign objects in sexual assault.

The types of objects that are described by victims are usually cylindrical and are objects that could be expected to be accessible at the scene of assault as they are common household items. The vagina was the most common site of penetration, but nearly half reported actual or attempted anal penetration. Actual or attempted anal penetration was nearly twice as common in the object group compared to those assaults not involving an object, however the 95% confidence intervals do overlap.

The higher rates of documented positive genital findings may simply reflect the consequence of body cavity penetration by a hard, sharp or inflexible object. However, it should not be assumed that genital injury in a case involving a foreign object is definitely due to the object as in many cases penetration by a body part also occurred. The higher rates of genital findings may indicate a more violent application of force by either foreign object or body part.

**Table 4**

Characteristics of cases with positive findings that were examined less than 7 days from the incident.

Injury type	Time to examination from incident	Object type	Object location
Perianal redness	<12 h	Unknown	Anal
Perianal redness, introital redness	<12 h	Dildo, bottle	Vaginal
Perianal abrasions	<12 h	Screw top container	Anal
Labial abrasions	12–24 h	Hard object	Vagina
Labial redness, perianal redness and abrasions	<12 h	Lubricant bottle	Vagina, anal
Introital tenderness	4–7 days	Bottle	Vagina
Redness and debris in vestibule	<12 h	Piece of glass, dirt, unsure	Vagina
Anal laceration and redness	12–24 h	Bottle	Vagina, anus
Hymenal abrasion, swollen introitus	12–24 h	Bottom stem of plastic glass	Vagina

**Table 5**

Characteristics of assault by type of sexual assault in attendees where a police evidence kit was completed.

Characteristic	With penetrative object			Without penetrative object		
	No.	%	95% CI	No.	%	95% CI
≥2 Assailants	8/20	40.0	19.1–63.9	77/520	14.8	11.9–18.2
Relationship to assailant						
Known	8/20	40.0	19.1–63.9	252/520	48.5	44.1–52.8
Just met	7/20	35.0	15.4–59.2	12/520	2.3	1.2–4.0
Unknown	4/20	20.0	5.7–53.7	230/520 <sup>a</sup>	44.2	39.9–48.6
Not recorded	1/20	5.0	0.1–24.9	0		
Unsure	0			26/520	5.0	3.3–7.2
Sought treatment before collection of police evidence kit	5/20	25.0	8.7–49.1	113/520	21.7	18.3–25.5

<sup>a</sup> This high percentage is a recording error; please see Section 4.

The findings documented by clinicians for both genital and non-genital injury include redness and tenderness both of which are non-specific findings and not necessarily indicative of injury. “Tenderness” is also a subjective finding that relies on the expression of discomfort by another person and not simple observation by the examiner. The evidentiary use of “tenderness” is limited for this reason but is included here as it was a commonly recorded finding.

The higher frequency of positive non-genital findings in assaults involving an object may suggest greater violence. The finding that multiple assailants and higher frequency of reported verbal threats, restraints and weapons in sexual assaults involving penetration by a foreign object may also reflect higher levels of violence.

A positive outcome of retrospective clinical audits is the identification of misclassification errors. Of note here is the difference in the documented relationship between the assailant and victim. The high percentage of “unknown” assailants in the other sexual assault category was unexpected and the difference between the object and other group may not be a true difference but rather the result of classification errors. Discussion with the treating clinicians revealed variability in the way the relationship was categorised, particularly between the “just met” and “unknown” categories. Identification of this error has allowed for more consistent data recording for the future.

By undertaking this audit we have identified important areas for practice development and education in relation to the use of penetrative objects during sexual assault. Asking about the use of such objects during history taking and considering that those who have experienced penetration by an object may have a higher incidence of genital and non-genital injury could improve and guide clinical management. Analysis of larger datasets containing cases where penetrative objects were used during a sexual assault may substantiate the findings of this small case series and/or reveal other issues associated with the use of objects.

### Conflict of Interest

None declared.

### Funding

No sources of additional funding.

### Ethical Approval

Ethical approval given by the ACT Health Human Research Ethics Committee on the 17 March 2008. Reference No. – ETH.2/08.207.

### Acknowledgements

The authors acknowledge Dr. Marian Currie for her assistance with statistical analysis; Cassandra Beaumont and Robyn Matchett for data entry; Prof. David Wells for editorial assistance.

### References

- Daniels RVRV, McCuskey CC. Abnormal vaginal bleeding in the nonpregnant patient. *Emerg Med Clin North Am* 2003;**21**(3):751–72.
- Drocton P, Sachs C, Chu L, Wheeler M. Validation set correlates of anogenital injury after sexual assault. *Acad Emerg Med* 2008;**15**(3):231–8.
- Elam AL, Ray VG. Sexually related trauma: a review. *Ann Emerg Med* 1986;**15**:576–84.
- Sommers MS. Defining patterns of genital injury from sexual assault: a review. *Trauma Viol Abuse* 2007;**8**:270–80.